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CLINICAL CASE

Drainage of amoebic liver abscess by single incision laparoscopic surgery. Report of a case☆

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KEYWORDS
Liver abscess;
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Laparoscopy;
Minimally invasive surgical procedures;
Single-incision laparoscopic surgery

Abstract
Background: Single incision laparoscopic surgery has increased recently due to successful results, achieved in several procedures. The aim of the present work is to present the first case in which single incision laparoscopy is used for the drainage of an amoebic liver abscess.
Clinical case: A 44-year-old man presented with intense right upper quadrant pain, generalised jaundice, tachycardia, fever, hepatomegaly and a positive Murphy's sign. Laboratory results revealed an increased plasma bilirubin, elevated alkaline phosphatase and transaminases, leucocytosis, negative viral panel for hepatitis, and positive antibodies against *Entamoeba histolytica*. On an abdominal computed tomography a 15 cm × 12.1 cm hypodense lesion was observed in the patient's liver, identified as an amoebic liver abscess. Analgesics and antibiotics were started and subsequently the patient was submitted to laparoscopic drainage of the abscess using a single port approach. Drainage and irrigation of the abscess was performed. Four days later the patient was discharged without complications.
Conclusion: Management of amoebic liver abscess is focused on the elimination of the infectious agent and obliteration of the abscess cavity in order to prevent its complications, especially rupture. Laparoscopic surgery has proved to be a safe and effective way to manage this entity.

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PALABRAS CLAVE
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Entamoeba histolytica;
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Cirugía por puerto único

Drenaje de absceso hepático amebiano por laparoscopia de puerto único. Reporte de un caso

Resumen
Antecedentes: El uso del puerto único ha adquirido impulso, debido a los resultados exitosos logrados recientemente en diversas disciplinas. El objetivo del presente trabajo es reportar el primer caso de la laparoscopia por puerto único, para el drenaje de un absceso hepático amebiano.
Caso clínico: Hombre de 44 años con dolor abdominal intenso en hipocondrio derecho, ictericia generalizada, taquicardia y fiebre; se palpa borde hepático a 5 cm por debajo del reborde costal, signo de Murphy positivo. Los estudios de laboratorio revelaron: hiperbilirrubinemia directa, elevación de fosfatasa alcalina y transaminasas, leucocitosis a expensas de neutrófilos, panel viral negativo para hepatitis, y anticuerpos positivos para *Entamoeba histolytica*. La tomografía computada abdominal mostró una lesión hipodensa de 15 por 12.1 cm en lóbulo hepático derecho. Se inició tratamiento con analgésicos, y doble esquema antibiótico. El paciente fue sometido a drenaje del absceso hepático por la vía laparoscópica a través de puerto único, aspirando 1200 cc de contenido de aspecto achocolatado, se realizó lavado de cavidad. Al cuarto día de internamiento el paciente fue dado de alta sin complicaciones.
Conclusión: El tratamiento del absceso hepático amebiano va dirigido hacia la erradicación del agente infeccioso y de la cavidad abscedada, ya que se trata de una entidad clínica que puede tener complicaciones severas, especialmente la ruptura. La laparoscopia por puerto único ha demostrado ser una alternativa segura y efectiva, en el tratamiento de los pacientes que requieren drenaje de abscesos amebianos.

Background

Liver amoebiasis is the commonest extraintestinal manifestation of the infection by *Entamoeba histolytic (E. histolytic)*, complicating the course of the disease in 3–10% of the subjects infected by this micro-organism.[1] It normally presents between the fifth and sixth decade of life,[2,3] with an equivalent distribution in men and women; 75% of the cases locates in the right hepatic lobe, they are characterised as unique and being surrounded by a thin cover of granulation tissue.[4]

This entity is found mainly in developing countries with tropical and subtropical weather. In Mexico, intestinal amoebiasis and its complications present an incidence of 384.15/100,000 inhabitants, being considered an area where the disease is endemic.[5,6]

Amoebicidal drugs are the first line of treatment in the management ofamoebic hepatic abscesses, metronidazole being the first line medication at national and international level due to its effectiveness and accessibility. Up to 90% of the cases are solved solely with pharmacological treatment. It is necessary to resort to invasive therapeutic measures in the remaining 10% which do not respond to treatment. This includes interventional radiology procedures and conventional or minimally invasive surgical procedures.[7,8]

Percutaneous drainage is considered the first invasive choice; however, there are conditions in which this procedure fails, in particular due to the density of the abscess content or technical or logistical difficulties in its performance; surgical drainage is indicated in these patients. Generally, the surgical treatment of these patients is performed through open procedures, and it has recently been demonstrated that the laparoscopic treatment of liver abscesses is safe and effective, with long-term favourable results.[7,9]

Advances in laparoscopic surgery have led to the development of new approaches that seek to be even less invasive, with similar postoperative results and higher aesthetic results compared to those of conventional laparoscopy. Single port laparoscopy or single incision laparoscopic surgery are among these techniques and have been growing in favour due to the results obtained in procedures such as cholecystectomy, adrenalectomy and colon resection.[10–12]

The *aim* of the present work is to present the first case in which single incision laparoscopy is used for the drainage of an amoebic liver abscess.

Clinical case

A 44-year-old man presented in the emergency department with a 9-day evolution history of abdominal pain located in the right hypochondrium, which increased in intensity until becoming intolerable, of oppressive and continuous nature, irradiated in girdling pain towards the back and subsided intermittently with the use of non-steroidal analgesics. The pain was accompanied by the appearance of one-week evolution generalised jaundice and unquantified fever the day before his admission.

He does not report relevant family history; the patient's medical history only reveals occasional consumption of alcoholic beverages, especially beer and pulque during youth.